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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/728,908	12/08/2003	Toshio Maruyama	A-9993	9304

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MILES & STOCKBRIDGE PC
1751 PINNACLE DRIVE
SUITE 500
MCLEAN, VA 22102-3833

EXAMINER

MITCHELL, KATHERINE W

ART UNIT PAPER NUMBER

3677

DATE MAILED: 06/15/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/728,908	Applicant(s) MARUYAMA ET AL.	
	Examiner Katherine W. Mitchell	Art Unit 3677	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 December 2004 and 22 March 2005.
 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4 and 6-13 is/are pending in the application.
 4a) Of the above claim(s) 2 and 8 is/are withdrawn from consideration.
 5) ☐ Claim(s) _____ is/are allowed.
 6) ☒ Claim(s) 1,3,4,6,7 and 9-13 is/are rejected.
 7) ☐ Claim(s) _____ is/are objected to.
 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
 10) ☒ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☒ All b) ☐ Some * c) ☐ None of:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
 * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Formal Matters

Applicant has elected claims 14 and 15, which are not present in the case.

Examiner assumes a typing error and that claim 13 is the final elected claim.

The indicated allowability of claims 3-4,8,9,and 13 is withdrawn in view of the newly discovered reference(s) to Dixon. Rejections based on the newly cited reference(s) follow.

Drawings

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the holding piece juxtaposed with the first surface and the flange juxtaposed with an opposite 2nd surface of the sheet-shaped member must be shown or the feature(s) canceled from the claim(s). No new matter should be entered. Juxtapose means:

jux·ta·posed, jux·ta·pos·ing, jux·ta·pos·es

To place side by side¹

but examiner does not see side by side placement as claimed in any figure. A better choice of wording is suggested for claims 1,3,4,and 7.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate

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prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Objections

2. Claim 1 is objected to because of the following informalities: the 3rd and 4th lines from the bottom of the first page of the claim recite "the holding piece". There is lack of proper antecedent basis. Examiner assumes this refers to the plurality of holding piece arms. Appropriate correction is required.

3. Claim 7 recites "the opposite end of the shank" in the last line, but it is not clear what it is opposite to. The opposite end to the flange end has been described, but obviously the flange end is opposite to the projecting arm end. Examiner assumes any end is an opposite end to something. This is also unclear in claims 9,10,12.

Claim Rejections - 35 USC § 102

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4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

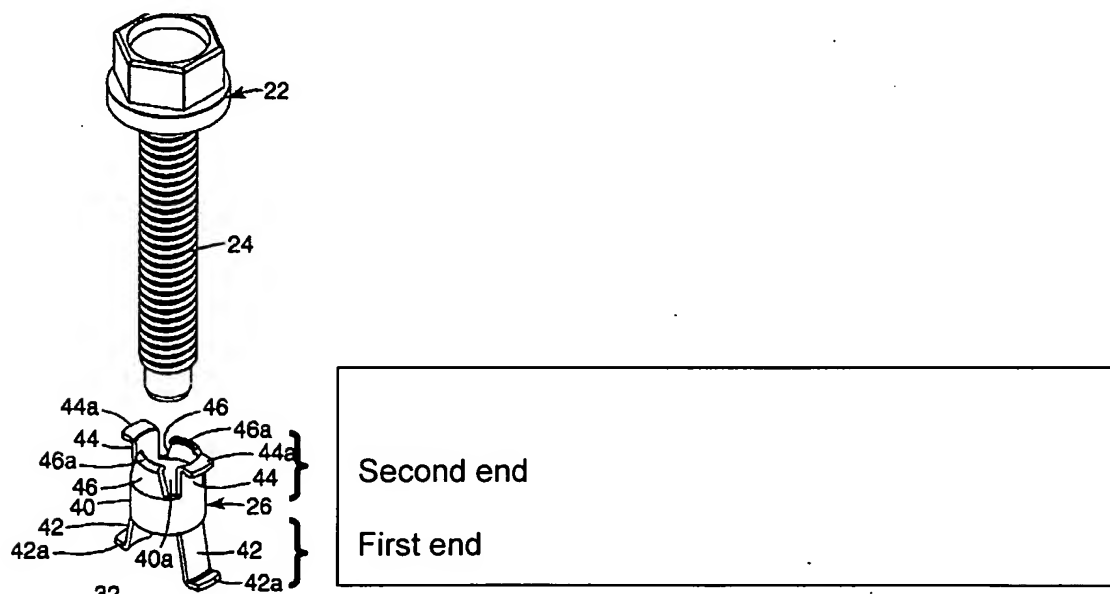
A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claim 1,3,4 6, are rejected under 35 U.S.C. 102(b) as being anticipated by Rebers et al USP 6174118.

Rebers teaches a fastener adapted to be attached to a sheet-shaped member, so that the sheet-shaped member can be attached to a mounting member via the fastener, the fastener comprising:

a tubular shank (24) adapted to be inserted into a mounting hole of the sheet-shaped member;



a plurality of spaced holding piece arms (42a), extending radially outward from a corresponding partial portion of the periphery of a first end of the

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shank; a flange (44a) extending outward from a second end of the shank, and {capable of} having an outer cross-dimension greater than an inner cross-dimension of the mounting hole of the sheet-shaped member; and at least one stud-engagement pawl (46a) extending into the interior of the shank, wherein the shank {is capable of} has a length less than that of a stem of a stud fixed to a mounting member with which the fastener is to be engaged, so that the stud stem protrudes from a first surface of the sheet-shaped member after the shank is inserted into the mounting hole, with the holding piece leading, until the holding piece is juxtaposed with the first surface and the flange is juxtaposed with an opposite second surface of the sheet-shaped member, and the stud is passed through the shank and the pawl is engaged with the stud, and wherein protrusion of the stud stem allows an auxiliary member to be mounted thereto (inherently capable of this function – no structure positively recited).

Re claim 3. A fastener adapted to be attached to a sheet-shaped member, so that the sheet-shaped member can be attached to a mounting member via the fastener, the fastener comprising: a tubular shank (24) adapted to be inserted into a mounting hole of the sheet-shaped member; at least one holding piece (42a), extending outward from a corresponding partial portion of the periphery of a first end of the shank; a flange (44a) extending outward from a second end of the shank, and {capable of} having an outer cross-dimension greater than an inner cross-dimension of the mounting hole of the sheet-shaped member; and at least one stud-engagement pawl

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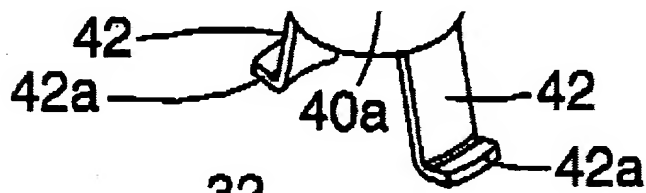
(46a) extending into the interior of the shank, wherein the shank {is capable of} has a length less than that of a stem of a stud fixed to a mounting member with which the fastener is to be engaged, so that the stud stem protrudes from a first surface of the sheet-shaped member after the shank is inserted into the mounting hole, with the holding piece leading, until the holding piece is juxtaposed with the first surface and the flange is juxtaposed with an opposite second surface of the sheet-shaped member, and the stud is passed through the shank and the pawl is engaged with the stud, and wherein protrusion of the stud stem allows an auxiliary member to be mounted thereto (inherently capable of this function – no structure positively recited), wherein there are a plurality of the stud-engagement pawls, (two are shown in the figure) each extending radially inward from a position near the first end of the shank.

Re claim 4: A fastener adapted to be attached to a sheet-shaped member, so that the sheet-shaped member can be attached to a mounting member via the fastener, the fastener comprising: a tubular shank (24) adapted to be inserted into a mounting hole of the sheet-shaped member; at least one holding piece (42a), extending outward from a corresponding partial portion of the periphery of a first end of the shank; a flange (44a) extending outward from a second end of the shank, and {capable of} having an outer cross-dimension greater than an inner cross-dimension of the mounting hole of the sheet-shaped member; and at least one stud-engagement pawl (46a) extending into the interior of the shank, wherein the shank {is capable of} has a length less than that of a stem of a stud fixed to a mounting member with which the fastener is to be

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engaged, so that the stud stem protrudes from a first surface of the sheet-shaped member after the shank is inserted into the mounting hole, with the holding piece leading, until the holding piece is juxtaposed with the first surface and the flange is juxtaposed with an opposite second surface of the sheet-shaped member, and the stud is passed through the shank and the pawl is engaged with the stud, and wherein protrusion of the stud stem allows an auxiliary member to be mounted thereto (inherently capable of this function – no structure positively recited), and wherein after an auxiliary member is mounted to the stud stem, a wall of the auxiliary member is in contact with the holding piece and the first end of the shank to allow the wall of the auxiliary member to be located at a position apart from the mounting member by a given distance (inherently capable of this function – no structure positively recited).

Re claim 6. The fastener as defined as defined in claim 1, wherein the holding piece arms (42a) have flat surfaces aligned with the first end of the shank.



42a is clearly shown as having flat

surfaces {capable of} aligned with the first end of the shank

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 7,9-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rebers in view of Dixon et al. USP 4615655.

Re claim 7: As discussed above, Rebers was described as teaching all the elements except the assembly components including a mounting member having a stud thereon, sheet shaped member, and auxiliary member. Examiner takes Official Notice that it is well-known in the fastener art to use a single stud of sufficient length and strength to connect multiple components, including panels, sheets, parts with holes (auxiliary members) in series so that an assembly is formed. This is evidenced by Dixon et al, who shows a fastener assembly including multiple sheet-shaped members, being held together with a fastener, with the sheet shaped member having a stud mounted through its hole and the stud protruding. The fastener shank would obviously be selected to have the proper length to correspond to the materials being connected. Therefore, it would have been obvious to one of ordinary skill in the art, having the teachings of Rebers and Dixon before him at the time the invention was made, to modify Rebers as taught by Dixon to include using the fastener to connect parts serially, in order to obtain an assembly of separate parts that are removably connected. One would have been motivated to make such a combination because oftentimes separate parts need to be connected together to panels or sheets, for example, when connecting accessories to car doors or insulation panels, and the Rebers fastener would allow multiple parts to be "pre-connected" as a unit in advance for a final component to be added to the threaded end of the stud.

Re claim 9. The assembly of claim 7, wherein there are a plurality of pawls extending radially inward from positions adjacent to the opposite end of the shank. Rebers shows multiple pawls 46a extending inwardly.

Re claim 10. The assembly of claim 7, wherein the stud is threaded and the wall of the auxiliary member is held between the opposite end of the shank and a nut on the stud. Rebers shows a threaded stud, which would inevitably allow an auxiliary member and nut to be subsequently added.

Re claim 11. The assembly of claim 7, wherein there are a plurality of outwardly projecting spaced holding piece arms. Rebers shows multiple arms.

Re claim 12. The assembly of claim 11, wherein the holding piece arms have flat surfaces aligned with the opposite end of the shank, and the wall of the auxiliary member is juxtaposed with the flat surfaces of the holding piece arms. Rebers shows arms with flat surfaces. An auxiliary piece added at the end of the stud opposite the stud mounting end would inevitably lay against the flat arm pieces.

Re claim 13. The assembly of claim 7, wherein the second side of the sheet-shaped member and the flange are in contact with the mounting member. The second side of a sheet shaped member and flange would inevitably contact the mounting member if that were the order they were mounted on the stud.

Response to Arguments

8. Applicant's arguments filed 12/2/2004 have been fully considered but they are not persuasive regarding independent claim 1 and Rebers. Rebers clearly shows multiple arms and pawls. While examiner could argue the obviousness of making the

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lower holding piece of Van Boven into multiple arms, for the sake of brevity the rejection is withdrawn in favor of Rebers.

9. Applicant's arguments with respect to claims 7, 10-12 have been considered but are moot in view of the new ground(s) of rejection.

10. As noted earlier, a new reference has been added to document that it is well known to use fasteners to connect assemblies. Items included in the assembly would be dictated by the items required in the overall article – that is, all sheet shaped items would be assembled if making a laminar item, but any component with a hole could be added to the shaft if it needed to be connected to the previously assembled other items.

Conclusion

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Katherine W. Mitchell whose telephone number is 571-272-7069. The examiner can normally be reached on Mon - Thurs 10 AM - 8 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, J. J. Swann can be reached on 571-272-7075. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Katherine W Mitchell
Examiner
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A handwritten signature in cursive script, appearing to read 'Katherine W Mitchell', written in black ink.

Kwm
6/8/05